

Oil shale project on fast track

By Lezlee E. Whiting

Byron Merrell said his emotions were "somewhere between excitement and terror" just days ago when he learned that his company's proposal for oil shale research and development had been chosen by the Bureau of Land Management to participate in a landmark federal government program.

Merrell, a long-time inventor and former Uintah County Commissioner, and Romit Bhattacharya were overwhelmed with joy by last week's announcement that their company, Oil-Tech Inc. was one of eight applicants whose plans to produce oil from shale are now eligible for "continued consideration," for coveted BLM leases.

That puts obscure Oil-Tech's name right up there in the same breath as Chevron, Exxon and Shell. Pretty heady stuff for the man who owns a retort a several miles southeast of Vernal and has been struggling for years to unlock vast oil shale resources buried in the Green River formation of eastern Utah.

"Of course we have known we

could do this and no one paid attention to it," Merrell said about his proven extraction process that can produce oil at a cost of about \$10 a barrel. "We're kind of like a cocklebur on a cow's tail - more of an annoyance rather than something to take interest in. Then when we show up in the same group as Chevron and Exxon it causes you to pause a little bit."

Oil-Tech has already proven its potential by being selected from among a field of 20 nominations the BLM received in response to a call in June 2005, for proposals for 160-acre research and development leases on public lands in Colorado, Utah, and Wyoming. The companies that win approval for experimental works will get first rights to lease close to 5,000 additional acres surrounding their 160-acre parcels.

The financial rewards of the lease are substantial; official estimates put the amount of recoverable oil in the Green River formation in these three states at 2.6 trillion barrels. That's roughly 60 percent of the world's known deposits and it surpasses Saudi Arabia's proven reserves of 261

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— Byron Merrell, project manager Oil-Tech Inc.

billion barrels.

"Sometimes we feel like we have a tiger by the tail," Merrell admits. He's been working on grabbing a hold of the tiger for over two decades now. He became interested in oil shale in the mid-1980s - at the same time the federally subsidized White River Shale Oil facility in Uintah County became a ghost town when the price of oil plunged, halting the need for the government to spend money to mine oil shale.

Merrell saw the downturn as a plus in his book. "I thought the best time to buy stock is when it's down and the best time to get involved in oil shale is when no one else is around."

Bhattacharya, of New Jersey, now CEO of Oil Tech, met Merrell

six years ago. He said he was immediately fascinated with Merrell's business acumen, brand of entrepreneurship and his patent that produces oil from oil shale through vaporization.

"We have technology that is environmentally sound, that extracts oil from shale efficiently and economically," said Bhattacharya. "Our modular design is very clever, you can pace the growth of the capital - one of the problems of larger retorts in the past was growth."

The retort - the facility where oil shale is ground up and then heated to the point of vaporization to produce liquid oil - has been designed by Oil-Tech in such a manner that it can be mass produced. "It is modular, it can be hauled around on the back of trucks," said Merrell.

Oil-Tech now has 30 days to further prove themselves. The next step in the BLM's evaluation process is to complete an environmental analysis under the NEPA (National Environmental Policy Act). More than 70 percent of the oil shale in the United States is on federal land, primarily in Colorado, Utah and Wyoming.

"Each of these proposals shows potential for advancing knowledge of oil shale recovery technology, evidence of economic viability, and adequate means for managing the environmental impact of oil shale development," said BLM Director Kathleen Clarke. "NEPA analysis will further ensure that oil shale development on federal lands is conducted with environmental and economic responsibility."

Clarke said that states and local communities will continue to be an integral part of the evaluation process.

Bill Johnson is the economic development director for Uintah County and also represents local communities on the Oil Shale Steering Committee, a work group that helps inform and make recommendations regarding oil shale research and development, as well as all unconventional energy resources.

Uintah County is already bursting at the seams thanks to the

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The writing portion is stumping 10 percent of seniors and 7 percent still need to pass the reading section of the test. (See related chart for school-by-school details.)

Seniors from Uintah High in Vernal have scored much better. Only 3 percent have not passed math, 2 percent have not passed writing and 1.5 percent have not passed reading, according to school counselor Jennifer Gudac.

Duchesne County School Dis-

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Roosevelt man new federal c

By Geoff Liesik

A Roosevelt man charged by federal prosecutors earlier this month with breaking into the home of his estranged common-law wife and beating her is now facing a federal kidnapping charge.

The added charge against John Anthony Larett came in an indictment handed down Wednesday night by a federal grand jury, and stems from a Jan. 2 incident on the Uintah-Ouray Indian Reservation. Larett, 27, was already facing federal charges for burglary of a dwelling and assault with serious bodily injury while within Indian Country for the same incident.

According to a complaint filed by the U.S. Attorney's Office on Jan. 5, Larett kicked down the door at the Fort Duchesne home where the woman, an enrolled member of the Ute Indian Tribe, was living and attacked her.

"Larett grabbed her by her hair and began to punch and kick her in the head," FBI Special Agent Kirk Francis wrote in the complaint. "At some point he threw her to the ground and started stomping on her head with his foot."

Investigators said after the initial assault, Larett dragged the woman, outside and forced her into his car. The woman's sister tried to help her escape, but Larett caught the victim and put her victim back in the car.

"[Larett] said that he would kill her if she tried to jump out," Francis wrote.

A Bureau of Indian Affairs police officer responding to the domestic dispute saw Larett speed

away from the stop he would with 5 mph. L ties de Vernal the car. Der K-9 to At t investi perfor telling goingt him. Stat has tw assault reduce vated Jan. 2 superv Parole Mel for the press Wedn. Larett assault "We charge eral cc Lar 8th Di forcibl eviden interfe driving alchoh A f state c 15. N initial Lar Count



THIS IS HOW IT WORKS — These vials show the stages of how oil shale rock mined from the ground. The rock has to be crushed and then vaporized in a retort where it is heated in a closed container without the presence of oxygen to form liquid oil or syncrude (synthetic crude oil). In addition to the oil products the process captures valuable by products.

Uintah Basin Standard
January 24, 2006

Susan FYI

File

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—Byron Merrell (with his back facing the retort) is extracting oil from oil shale in a way that is environmentally sound. On Merrell's right is a far away at the White River Shale facility. barrels of shale oil under US soil, over half the White River Formation of the Uintah Basin, southwestern Wyoming.

it Loud

By
Cheryl
Mecham



never talked back. He never disagreed. He patiently listened and obeyed the bit that turned his head in whatever direction I felt we should go.

When I was 16 I was riding another horse — a 1968 Mustang. Bright yellow, black interior. My mother's pride and joy. I was driving home from the grocery store when some fellow who'd been having a few drinks on his way home from work barreled through a stop sign and hit us broadside.

The Mustang was totaled. It had to be put down. My mother was furious.

"Why were you on that road?" she asked.

I explained there was a field of horses and a nearby apple tree where I'd stop and coax them over with the fallen fruit. She couldn't understand why I was so wild about horses and in that moment she didn't care. I tearfully told her that I'd take all my current and future wages and buy her another Mustang. Instead she had

Oil Shale Is Algae A 'Retort' Is A Furnace Did you know?

By Lezlee E. Whiting

Oil shale is a misnomer, there is no oil in it and there is no shale. Oil shale is actually compacted seaweed, moss and bugs compacted in silt stone.

"It's probably 95 percent algae but it is compacted so it looks like rock," explained Byron Merrell, a Vernal man who holds the patent to a process that extracts oil from oil shale. "There is so much algae in it that if you hold a match to it, it will burn."

Oil shale doesn't come from the remains of dead dinosaurs and it doesn't take massive reservoirs of water to make the transition from oil shale to oil. In fact, Oil-Tech's process uses minimal water.

Thirty-five to 55 million years ago in eastern Utah there was a huge massive very shallow fresh water lake and the algae would bloom like they do in a pond. It made a very rich thick deposit of biomass.

"This is probably the feedstock for all oil world wide - it's impossible to have enough dinosaurs to

do this," said Merrell.

In 1993 Oil-Tech Inc. built their first retort. A retort is essentially a furnace which heats up the organic particles in the rock which destroy themselves and become vapors.

"It's the same thing that happens when you burn a pile of leaves and there is no oxygen and it just smokes," Merrell explained. "That's really what a retort does, there is no oxygen in it and it just burns - it just gives off vapors and they are condensed, and now we have oil."

Similar to crude oil after it comes out of the ground, the oil that Oil-Tech derives from shale must be upgraded because there's some dust and smoke after the initial process, said Merrell.

Oil-Tech now enters phase one where they will show federal government officials that in a controlled manner and on a research and development basis that they "can deliver what we say we can deliver," said Oil Tech CEO Romit Bhattacharya, who has been with the company for the past six years. "In conjunction we will submit a full-blown plan: mining, product purification, co-generation and by-product."

Oil-Tech combines with Baard Energy on joint oil shale venture

Oil-Tech, Inc. and Baard Energy, L.L.C. last week announced that they have formed a joint venture to advance the development of liquid hydrocarbons derived from oil shale. Their new company, White River Energy, LLC will move forward with the design and construction of a patented process which will produce alternative energy products, including clean fuels, in Uintah County. (See related story on front page.)

"We are delighted in forging a joint venture partnership with Baard Energy," said Romit Bhattacharya, CEO of Oil-Tech. "With the passage of the Energy Policy Act of 2005, Congress has recognized that it is in the country's interest to develop alternative supplies of energy from native sources of hydrocarbons."

Growing demands on the glo-

bal energy supply from emerging economies such as China and India, have made it imperative that the U.S. reduce their dependence on petroleum-based fuels that are being sourced from increasingly unstable regions of the world, he said.

Baard Energy's corporate strategy involves the advancement of alternative energy processes and products, said John Baardson, CEO for Baard. "Working with Oil-Tech's unique shale-to-oil retort technology, we now have all the components needed for an economically viable oil shale project."

The project will rely on the abundant oil shale resources found in the White River area and Oil-Tech's patented retort technology, according to Baardson. "We are confident that this investment and our business strategy will

OIL SHALE

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burgeoning price of oil and gas that has spurred fast and furious development and production of the natural resource. So it's no wonder that county officials are just as thrilled over the news that production of oil from oil shale could add more high-paying jobs to the local economy.

"I guess we get so excited about the oil shale leases because we have so much of it out here," Johnson said. "The research retort that Oil-Tech has in operation right now ... shows the proof is in the pudding."

Oil-Tech's retort can produce one barrel of oil in one hour and can operate around the clock, said Merrell. The next step is to ratchet up production a few notches.

"We have a retort that is about 47.5-feet long and sits in a building that is 80-feet long, we are in the process of designing, and it will be further engineered and refined ... and we will produce 1,000 barrels a day, that requires

1,000 cubic yards of shale rock." Oil shale used in the process will come from a supply of 30,000 tons of shale left outside the abandoned White River mine.

Merrell said if everything goes according to their "best hopes," within two years Oil-Tech could be producing over "6,000 barrels of oil a day."

The cost of the retort is about the same as drilling an oil well in the Rocky Mountain region, but the cost of operation at the retort would come in at under \$1 barrel, he said. "So we are competitive with the drilling rig."

The price of the marketed oil shale will be dictated at the market price for crude because once it is produced, it essentially becomes crude oil. "It would be the same as any other crude oils ... as if it came out of Altamont or Rangley, Colorado," said Merrell.

SENIORS

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where 96 percent of girls have passed but only 90 percent of boys.

The gender gaps are much more pronounced in Duchesne County where there are 23 senior girls compared to 33 senior boys who have not yet passed the math portion; eight girls compared to 21 boys have not passed reading; 15 girls compared to 31 boys have not passed the writing portion ... the competency test.

The state board is asking legislators for \$16 million to beef up math instruction in elementary grades and \$6.1 million for USBCT remedial help.

Bell said there is no money in the Duchesne district's budget for remedial crash courses this year. But students who want to brush up for their final stab at Utah Basic Skills Competency Test can take free tutorials through the Electronic High School at ehs.uen.org.

LOST?

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